GAATTCCGGGTGGGTAGGTCGGGCAGGGTAGGACAGGCCTAAGAGAGAGGCCGGACAGACCTCC
TTTGGAAGCAGCCACTTCTGGTCCCCATCCCTGGAGCGATCGAGCGCAGGATCTGCTGTCCCAT
GGGACAGCAGATCTCTCTTCCCAGTGCACAGCTTCTCCTCTGCCTGTTTTCCCTGCTTCCAGTG
CTCCAGGTGGCCCAACCAGGCCAGGCACCCCAGGACCAGCCCCTGTGGACACTTTTGGAGCAGT
ACTGCCACAGGACCACAATTGGGAATTTTTCAGGTCCCTACACCTACTGCAACACGACCTTGGA
CCAGATCGGGACCTGCTGGCCACAGAGCGCACCCGGAGCCCTAGTAGAGAGACCGTGCCCCGAG
TACTTCAATGGCATCAAGTACAACACGACCCGGAATGCCTACAGAGAGTGCCTGGAGAACGGGA
CCTGGGCCTCAAGGGTCAACTACTCACACTGCGAACCCATTTTGGATGACAAGCAGAGAAAGTA
TGACCTGCATTACCGAATCGCCCTCATTGTCAACTACCTGGGTCACTGTGTTTCCGTGGTGGCC
CTGGTGGCCGCTTTCCTGCTTTTCCTAGTGCTGCGGAGTATCCGCTGCCTGAGGAATGTGATCC
ACTGGAACCTCATCACCACCTTCATTCTGAGAAACATCGCGTGGTTCCTGCTGCAACTCATCGA
CCACGAAGTGCACGAGGGCAATGAGGTCTGGTGCCGCTGCATCACCACCATCTTCAACTATTTT
GTGGTCACCAACTTCTTCTGGATGTTTGTGGAGGGCTGCTACCTGCACACGGCCATTGTCATGA
CGTACTCCACAGAGCACCTGCGCAAGTGGCTTTTCCTCTTCATTGGATGGTGCATTCCCTGCCC
TATCATCATCGCCTGGGCAGTTGGCAAACTCTACTATGAGAATGAGCAGTGCTGGTTTGGCAAG
GAAGCTGGTGATTTGGTGGACTACATCTACCAGGGCCCCGTCATGCTTGTGCTGTTGATCAATT
TTGTATTTCTGTTTAACATCGTCAGGATCCTGATGACGAAGTTACGAGCATCCACCACGTCCGA
GACAATCCAATACAGGAAGGCAGTGAAGGCCACGCTGGTCCTCCTCCCCCTGTTGGGCATCACC
TACATGCTCTTCTTTGTCAATCCTGGCGAGGACGACCTGTCCCAGATTGTGTTCATCTACTTCA
ACTCTTTCCTGCAGTCCTTCCAGGGTTTCTTTGTGTCCGTTTTCTACTGCTTCTTCAATGGAGA
GGTGCGCGCGGCCCTGAGAAAGCGGTGGCACTCGGGGCAGGACCACCACGCCCTCCGGGTGCCT
GTGCGCCGGGCCATGTCCATCCCTACGTCGCCCACCAGGATCAGCTTCCACAGCATCAAGCAGA
CAGCTGCTGTGTGACCCTCTGTCACCGTCTGCCCGGCAGTCCACCACTGAGGCAGCTTCTCCAT
CCTTTACAGCCTTCCCCTGGGTCCTCCTTGCTACCCTGACCCACAGGTACAAGGTACAGGAGAA
GGGAGGAGAACGAACACTCCC (SEQ ID NO:1)

FIGURE 1

underlined = deleted in targeting construct

[ ] = sequence flanking Neo insert in targeting construct

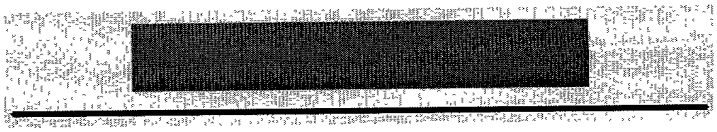
GAATTCCGGGTGGGTAGGTCGGGCAGGGTAGGACAGGCCTAAGAGAGAGGCCGGACAGAC
CTCCTTTGGAAGCAGCCACTTCTGGTCCCCATCCCTGGAGCGATCGAGCGCAGGATCTGC
TGTCCCATGGGACAGCAGATCTCTCTTCCCAGTGCACAGCTTCTCCTCTGCCTGTTTTCC
CTGCTTCCAGTGCTCCAGGTGGCCCAACCAGGCCAGGCACCCCAGGACCAGCCCCTGTGG
ACACTTTTGGAGCAGTACTGCCACAGGACCACAATTGGGAATTTTTCAGGTCCCTACACC
TACTGCAACACGACCTTGGACCAGATCGGGACCTGCTGGCCACAGAGCGCACCCGGAGCC
CTAGTAGAGAGACCGTGCCCCGAGTACTTCAATGGCATCAAGTACAACACGACCC[GGAA
TGCCTACAGAGAGTGCCTGGA]GAACGGGACCTGGGCCTCAAGGGTCAACTACTCACACT
GCGAACCCATTTTGGATGACAAGCAGAGAAAGTATGACCTGCATTACCGAATCGCCCTCA
TTGTCAACTACCTGGGTCACTGTGTTTCCGTGGTGGCCCTGGTG[GCCGCTTTCCTGCTT
TTCCTAGTGCTGCG]GAGTATCCGCTGCCTGAGGAATGTGATCCACTGGAACCTCATCAC
CACCTTCATTCTGAGAAACATCGCGTGGTTCCTGCTGCAACTCATCGACCACGAAGTGCA
CGAGGGCAATGAGGTCTGGTGCCGCTGCATCACCACCATCTTCAACTATTTTGTGGTCAC
CAACTTCTTCTGGATGTTTGTGGAGGGCTGCTACCTGCACACGGCCATTGTCATGACGTA
CTCCACAGAGCACCTGCGCAAGTGGCTTTTCCTCTTCATTGGATGGTGCATTCCCTGCCC
TATCATCATCGCCTGGGCAGTTGGCAAACTCTACTATGAGAATGAGCAGTGCTGGTTTGG
CAAGGAAGCTGGTGATTTGGTGGACTACATCTACCAGGGCCCCGTCATGCTTGTGCTGTT
GATCAATTTTGTATTTCTGTTTAACATCGTCAGGATCCTGATGACGAAGTTACGAGCATC
CACCACGTCCGAGACAATCCAATACAGGAAGGCAGTGAAGGCCACGCTGGTCCTCCTCCC
CCTGTTGGGCATCACCTACATGCTCTTCTTTGTCAATCCTGGCGAGGACGACCTGTCCCA
GATTGTGTTCATCTACTTCAACTCTTTCCTGCAGTCCTTCCAGGGTTTCTTTGTGTCCGT
TTTCTACTGCTTCTTCAATGGAGAGGTGCGCGCGGCCCTGAGAAAGCGGTGGCACTCGGG
GCAGGACCACCACGCCCTCCGGGTGCCTGTGCGCCGGGCCATGTCCATCCCTACGTCGCC
CACCAGGATCAGCTTCCACAGCATCAAGCAGACAGCTGCTGTGTGACCCTCTGTCACCGT
CTGCCCGGCAGTCCACCACTGAGGCAGCTTCTCCATCCTTTACAGCCTTCCCCTGGGTCC
TCCTTGCTACCCTGACCCACAGGTACAAGGTACAGGAGAAGGGAGGAGAACGAACACTCC
C

FIGURE 2A

Gene Sequence Structure *

441 bp Sequence Deleted 582 bp

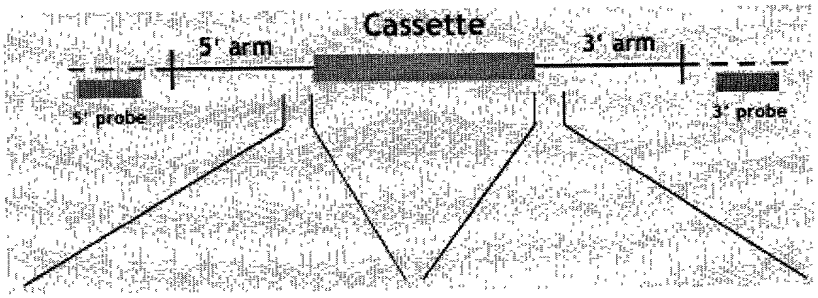
Size of full-length cDNA: 1557 bp



Targeting Vector* (genomic sequence)

Construct Number: 3050

LacZ-Neo Cassette



Arm Length:
5': 3.1 kb
3': 2.5 kb

5'>AGCCCTATGTGTAATTTTCAT ATAAATGACTCATATTAGCTTTCA GATATGCATTGTGTTTTCAGGTCT GGGAGAACTAAGGAGTGTGGACCT TATCCTGCAGGTACTAGGGAGCCA GGGAGGGCTTTTGAGGCGGGAGGG CGTCCTGACTCTCAGTGGTTGGCA TCTTCTCTAGGGAATGCCTACAGA GAGTGCCTGGA<3' (SEQ ID NO:2)	5'>GCCGCTTTCCTGCTTTTCCTA GTGCTGCGGTGAGTCCACCTCCAC CCTGCTTCCTCCTTGTCTTTGCCT CTCCCAGACATTGTCTCTTCCATT CTGGGGCCCCGGGAACAGTAGCCA GAAGTGGGTTTAAGTCAGACCCCC AGGGCCATGACCACCAGCCTGCCT GAAGGGTAGAGAGCAAGCCCAGCT GGGACCACCAG<3' (SEQ ID NO:3)

Targeting Vector
Endogenous Locus

* Not drawn to scale

FIGURE 2B